design zone maps are those identified in part 3280 of this chapter.

(a) *Wind zone.* Manufactured homes must not be installed in a wind zone that exceeds the design wind loads for which the home has been designed, as evidenced by the wind zone indicated on the home's data plate and as further defined by counties or local governments within affected states, as applicable, in § 3280.305(c)(2) of the Manufactured Home Construction and Safety Standards in this chapter.

(b) *Roof load zone.* Manufactured homes must not be located in a roof load zone that exceeds the design roof load for which the home has been designed, as evidenced by the roof load zone indicated on the home's data plate and as further defined by counties or local governments within affected states, as applicable, in § 3280.305(c)(3) of the Manufactured Home Construction and Safety Standards in this chapter. Refer to § 3285.315 for Special Snow Load Conditions.

(c) *Thermal zone.* Manufactured homes must not be installed in a thermal zone that exceeds the thermal zone for which the home has been designed, as evidenced by the thermal zone indicated on the heating/cooling certificate and insulation zone map and as further defined by counties or local governments within affected states, as applicable, in § 3280.504(b)(5) of the Manufactured Home Construction and Safety Standards in this chapter. The manufacturer may provide the heating/cooling information and insulation zone map on the home's data plate.

§ 3285.104 Moving manufactured home to location.

Refer to § 3285.902 for considerations related to moving the manufactured home to the site of installation.

§ 3285.105 Permits, other alterations, and on-site structures.

Refer to § 3285.903 for considerations related to permitting, other alterations, and on-site structures.

Subpart C—Site Preparation

§ 3285.201 Soil conditions.

To help prevent settling or sagging, the foundation must be constructed on firm, undisturbed soil or fill compacted to at least 90 percent of its maximum relative density. All organic material such as grass, roots, twigs, and wood scraps must be removed in areas where footings are to be placed. After removal of organic material, the home site must be graded or otherwise prepared to ensure adequate drainage, in accordance with § 3285.203.

§ 3285.202 Soil classifications and bearing capacity.

The soil classification and bearing capacity of the soil must be determined before the foundation is constructed and anchored. The soil classification and bearing capacity must be determined by one or more of the following methods, unless the soil bearing capacity is established as permitted in paragraph (f) of this section:

(a) *Soil tests.* Soil tests that are in accordance with generally accepted engineering practice; or

(b) *Soil records.* Soil records of the applicable LAHJ; or

(c) *Soil classifications and bearing capacities.* If the soil class or bearing capacity cannot be determined by test or soil records, but its type can be identified, the soil classification, allowable pressures, and torque values shown in Table to § 3285.202 may be used.

(d) A pocket penetrometer; or

(e) In lieu of determining the soil bearing capacity by use of the methods shown in the table, an allowable pressure of 1,500 psf may be used, unless the site-specific information requires the use of lower values based on soil classification and type.

(f) If the soil appears to be composed of peat, organic clays, or uncompacted fill, or appears to have unusual conditions, a registered professional geologist, registered professional engineer, or registered architect must determine the soil classification and maximum allowable soil bearing capacity.

TABLE TO § 3285.202

Soil classification		Soil description	Allowable soil bearing pressure (psf) [1]	Blow count ASTM D 1586–99	Torque probe [3] value [4] (inch-pounds)-
Classification number	ASTM D 2487–00 or D 2488–00 (incorporated by reference, see § 3285.4)				
1	.....	Rock or hard pan	4000+		
2	GW, GP, SW, SP, GM, SM	Sandy gravel and gravel; very than dense and/orcemented sands;coursegravel/cobbles;preloaded silts,clays and coral.	2000	40+	More than 550.
3	GC, SC, ML, CL	Sand; silty sand; clayey sand; siltygravel; medium dense course sands; sandygravel; and very stiff silt, sand clays.	1500	24–39	351–550.
4A	CG, MH [2]	Loose to medium dense sands; firm to stiff clays and silts; alluvial fills.	1000	18–23	276–350.
4B	CH, MH [2]	Loose sands; firm clays; alluvial fills	1000	12–17	175–275.
5	OL, OH, PT	Uncompacted fill; peat; organic clays	Refer to 3285.202(e).	0–11	Less than 175.

Notes:
[1] The values provided in this table have not been adjusted for overburden pressure, embedment depth, water table height, or settlement problems.
[2] For soils classified as CH or MH, without either torque probe values or blow count test results, selected anchors must be rated for a 4B soil.
[3] The torque test probe is a device for measuring the torque value of soils to assist in evaluating the holding capacity of the soil in which the ground anchor is placed. The shaft must be of suitable length for the full depth of the ground anchor.
[4] The torque value is a measure of the load resistance provided by the soil when subject to the turning or twisting force of the probe.

§ 3285.203 Site Drainage.

(a) *Purpose.* Drainage must be provided to direct surface water away from the home to protect against erosion of foundation supports and to prevent water build-up under the home, as shown in Figure to § 3285.203.

(b) The home site must be graded as shown in Figure to § 3285.203, or other methods, such as a drain tile and automatic sump pump system, must be provided to remove any water that may collect under the home.

(c) All drainage must be diverted away from the home and must slope a minimum of one-half inch per foot away from the foundation for the first ten feet. Where property lines, walls, slopes, or other physical conditions prohibit this slope, the site must be provided with drains or swales or otherwise graded to drain water away from the structure, as shown in Figure to § 3285.203.

(d) *Sloped site considerations.* The home, where sited, must be protected from surface runoff from the surrounding area.

(e) Refer to § 3285.902 regarding the use of drainage structures to drain surface runoff.

(f) *Gutters and downspouts.* Manufacturers must specify in their installation instructions whether the home is suitable for the installation of gutters and downspouts. If suitable, the installation instructions must indicate that when gutters and downspouts are installed, the runoff must be directed away from the home.